

CLAIMS

WHAT IS CLAIMED IS:

1. A printer comprising:

a printer case having a bottom wall; and
an automatic paper feeder having a stacker section
capable of setting a plurality of sheets of paper therein, the
bottom of said stacker section being formed by said bottom wall.

2. The printer as claimed in claim 1, further including
a feed-in roller for feeding the set sheets of paper one by one,
at least one loop holder for restricting a loop formed at a leading
end of the paper fed by said feed-in roller, at least one of said
loop holders being formed integrally with said printer case.

3. The printer as claimed in claim 2, and including a
pair of left and right loop holders, at least one of said left and
right loop holders being formed integrally with said printer case.

4. The printer as claimed in claim 1, further
comprising a feed-in roller for feeding the set sheets of paper one
by one, and a pair of left and right loop canceling walls for
canceling a loop formed at a leading end of the paper fed by said
feed-in roller, at least one of said left and right loop canceling
walls being formed integrally with said printer case.

5. A printer comprising:

a stacker section capable of setting a plurality of
sheets of paper therein;

a hopper disposed in said stacker section to urge
the paper upwardly;

at least one swinging member having a separation
pawl located above a corner of a leading end of the paper and a
pressing-down portion for pressing down said hopper, said at least
one swinging member being supported swingably about a shaft located
between said separation pawl and said pressing-down portion; and

an operation lever having an actuating portion
capable of pressing downward said swinging member, said operation
lever being supported rotatably above said stacker section.

6. The printer as claimed in claim 5, and including a pair of said swinging members supported swingably about a shaft, said operation lever having a pair of said actuating members for pressing downward said swinging members.

7. The printer as claimed in claim 6, wherein said operation lever is provided with a restricting portion for restricting the number of sheets of paper which are inserted and set in said stacker section when said swinging members are swung by said actuating portions by rotating said operation lever.

8. The printer as claimed in claim 5, wherein said operation lever serves as a discharged-paper tray.

9. The printer as claimed in claim 8, wherein a holding portion is formed in each of said swinging members to hold a rotated position of said operation lever by engaging with said actuating portion when said swinging members are swung by rotating said operation lever.

10. A printer comprising:
a frame;
a feed-in roller for feeding sheets of paper one by one;

a carriage for printing the sheet fed by said feed-in roller;

a feed-in gear for rotating said feed-in roller;
a movable gear supported rotatably by a rotatable lever and capable of assuming a first position at which said movable gear meshes with said feed-in gear to rotate said feed-in gear and a second position at which said movable gear does not mesh with said feed-in gear; and

a spring member having one end supported by said lever and another end supported by said frame, said carriage including an actuating portion provided on said carriage to rotate said lever toward said first position at which said movable gear meshes with said feed-in gear by pressing and displacing an intermediate portion of said spring member.

11. The printer as claimed in claim 10, wherein said spring member is formed of a rod-like coil spring.
12. An actuating mechanism for a lever comprising:
a frame;
a lever supported rotatably on said frame;
a spring member having one end supported by said lever and another end supported by said frame; and
an actuating portion for rotating said lever by pressing and displacing an intermediate portion of said spring member.
13. The actuating mechanism for a lever as claimed in claim 12, wherein said spring member is formed of a rod-like coil spring.
14. An ink jet printer comprising:
an ink jet head for effecting printing at a print area;
a feed roller for feeding paper to said print area where printing is effected;
a transport roller disposed downstream of said feed roller relative to the print area to transport the paper in such a manner as to stretch the paper between said transport roller and said feed roller by rotating said transport roller at a peripheral speed faster than that of said feed roller; and
an ink shielding portion disposed so as to form a passage for the paper between said ink shielding portion and said ink jet head over the entire print area.
15. The ink jet printer as claimed in claim 14, wherein said ink shielding portion is provided with a paper guide for introducing a leading end of the paper to said transport roller, said paper guide being disposed downstream of a portion of said ink shielding portion opposing the print area.

16. An ink jet printer comprising:
an ink jet head for effecting printing at a print area;

a feed roller for feeding paper to said print area where printing is effected;

a transport roller disposed downstream of said feed roller relative to the print area to transport the paper in such a manner as to stretch the paper between said transport roller and said feed roller by rotating said transport roller at a peripheral speed faster than that of said feed roller; and

a pressing member for pressing the paper over essentially an entire widthwise length of said paper, a pressing portion of said pressing member being disposed at a position between said feed roller and said transport roller and where said pressing portion is in contact with neither of said two rollers.

17. The ink jet printer as claimed in claim 16, further including:

a feed roller for feeding paper to a print area where printing is effected;

a transport roller disposed downstream of said feed roller relative to the print area; and

a pressing member for pressing the paper over essentially an entire widthwise length of said paper, a pressing portion of said pressing member being disposed at a position between said feed roller and said transport roller and where said pressing portion is in contact with neither of said two rollers.

18. An ink jet printer for discharging paper printed by a printing section having an ink jet head, by means of a plurality of paper discharge rollers and a plurality of star wheels each of which rotates while nipping the paper between respective pairs of said star wheels and said paper discharge rollers, said ink jet printer comprising:

a shaft for supporting two star wheels as a unit at opposite ends of said shaft; and

an urging member for urging a central portion of said shaft toward said paper discharge rollers.

19. A method of discharging paper characterized in that the paper printed by a printing section having an ink jet head is discharged while forcibly urging the paper in a concave shape in which a printed surface is concaved as seen in a discharging direction.

20. A method of discharging paper, comprising the steps of:

transporting the paper printed by a printing section having an ink jet head in a flat state as seen in a discharging direction; and

discharging the paper while forcibly urging the paper in a concave shape in which a printed surface is concaved as seen in the discharging direction.

21. A method of discharging paper according to claim 20, further comprising the steps of:

holding a trailing end of the paper intact in the concave shape upon completion of a discharging operation; and

thereafter canceling the holding of the paper in said concave shape by allowing a leading end of ensuing paper to be brought into contact with the trailing end of the paper.

22. A method of discharging paper according to claim 20, further comprising the step of:

temporarily stopping the transport of the ensuing paper after the holding of the paper is canceled by allowing the leading end of the ensuing paper to be brought into contact with the trailing end of the paper.

23. An ink jet printer comprising:

a pair of both-side supporting portions for supporting from below both side portions of the paper which has been printed on an upper surface thereof by a printing section having an ink jet head and discharged and is being discharged; and

a pushing-down portion for pushing down a central portion of the paper.

24. The ink jet printer as claimed in claim 23, further comprising:

a transport section disposed between said printing section and said pushing-down portion to transport the paper in a flat state as seen in a discharging direction.

25. The ink jet printer as claimed in claim 23, wherein said both-side supporting portions are defined by fixed ribs, and said pushing-down portion is defined by a knurled roller.

26. The ink jet printer as claimed in claim 25, wherein said knurled roller is supported by an arm which is rotatable with respect to a frame.

27. The ink jet printer as claimed in claim 25, wherein upper surfaces of said fixed ribs are inclined upwardly in the discharging direction of the paper.

28. The ink jet printer as claimed in claim 25, wherein said knurled roller pushes down the paper by means of its own weight.

29. An ink jet printer comprising:

a carriage which moves along a print area;
a head mounted on said carriage;
an ink cartridge mounted on said carriage for supplying ink to said head;
a lever provided on said carriage for mounting or demounting said ink cartridge with respect to said carriage; and
a stopper positioned to stop the movement of said carriage by coming into contact with said lever when an operation of mounting said ink cartridge by means of said lever has not been effected completely.

30. The ink jet printer as claimed in claim 29, wherein a carriage stop position is set for mounting or demounting said ink cartridge with respect to said carriage, said stopper being disposed in a vicinity of the carriage stop position.

31. The ink jet printer as claimed in claim 29, wherein the carriage stop position is a capping position at which a cap is fitted to said head.

32. The ink jet printer as claimed in claim 29, wherein said stopper is formed integrally with a case of said printer.

33. An ink jet printer comprising:
a carriage which moves along a print area;
a head mounted on said carriage;
an ink cartridge mounted on said carriage for supplying ink to said head;
a resilient member supporting said ink cartridge on said carriage in a direction of movement of said carriage.

34. The ink jet printer as claimed in claim 33, wherein said resilient member comprises a lever mounted on said carriage for mounting or demounting said ink cartridge with respect to said carriage.

35. An ink jet printer having a print area where the printing of recording paper is effected by a head mounted on a carriage reciprocating in a direction of a row and a nonprint area which is located on both sides of the print area, the printing by the head not being effected at said non-print area, said ink jet printer comprising:

a paper feeding mechanism;
a suction mechanism;
a drive gear capable of assuming a paper-feed driving position which is located in one of the nonprint areas for driving said paper feeding mechanism for feeding the recording paper in a direction perpendicular to the direction of the row and a suction driving position for driving said suction mechanism for sucking ink from said head;

changeover means disposed on said carriage for changing over a position of said drive gear; and

selecting means located in another one of said nonprint areas for selecting a state of said changeover means when said carriage enters said area.

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